BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2019-185-E
DOCKET NO. 2019-186-E

In the Matter of: South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Carolinas, LLC's and Duke Energy Progress LLC's Standard Offer Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) – S.C. Code Ann. Section 58-41-20(A)	**PRE-HEARING BRIEF OF DUKE ENERGY CAROLINAS, LLC AND DUKE ENERGY PROGRESS, LLC**

Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and, together with DEC, the "Companies" or "Duke"), by and through counsel, hereby respectfully submit this Pre-Hearing Brief pursuant to Order Nos. 2019-104-H and 2019-105-H setting a prehearing briefing schedule in the above-referenced dockets. In support of this filing, the Companies state the following:

I. Statement of the Case and Approvals Requested

The South Carolina Energy Freedom Act ("Act 62" or the "Act") establishes a new statutorily-mandated process for the Public Service Commission of South Carolina (the "Commission") to review and approve the Companies' avoided cost rates and framework for implementing Section 210 of the Public Utility Regulatory Policies Act of 1978 ("PURPA") for small power producers. In particular, Act 62 directs the Commission to approve "each electrical utility's standard offer, avoided cost methodologies, form contract power purchase agreements, commitment to sell forms, and any other terms or conditions

necessary to implement this section" at least every two years beginning six months from the Act's effective date. S.C. Code Ann. § 58-41-20(A).

Pursuant to these statutory requirements and Commission Order No. 2019-524, on August 14, 2019, DEC and DEP jointly filed an Application requesting Commission approval of the following:

- The Companies' application of the peaker methodology to calculate DEC's and DEP's avoided cost rates;
- DEC's and DEP's updated Standard Offer, as now defined by S.C. Code Ann. § 58-41-10(15), which includes the Companies' respective Schedule PP (SC) Purchased Power tariffs ("Standard Offer Tariff" or "Schedule PP"), Terms and Conditions for the Purchase of Electric Power ("Standard Offer Terms and Conditions" or "Terms and Conditions"), and Standard Offer power purchase agreement ("Standard Offer PPA") available to all qualifying cogenerators and small power production facilities ("QFs") up to 2 megawatts ("MW") in size;
- DEC's and DEP's form of power purchase agreement available to small power producer QFs that are not eligible for the Standard Offer ("Large QF PPA"); and
- DEC's and DEP's notice of commitment to sell form ("Notice of Commitment Form").

II. Identification of Witnesses Pre-Filing Testimony and Brief Summary

In support of the Application, the Companies concurrently pre-filed direct testimony of the following witnesses:

- **George Brown**, General Manager of Strategy, Policy, and Strategic Investment in the Duke Energy Distributed Energy Technology group, who provides an overview of the PURPA mandatory purchase obligation, Act 62, and the Companies' efforts through the instant Application to reduce the risk on the using and consuming public consistent with Section 58-41-20(A) of the Act.
- **Glen A. Snider**, Director of Carolinas Resource Planning and Analytics, who supports the Companies' continued application of the peaker methodology to quantify DEC's and DEP's avoided capacity and energy costs as well as the calculation of DEC's and DEP's avoided cost rates to be paid to QFs pursuant to PURPA.
- **Steven B. Wheeler**, Director of Pricing and Regulatory Solutions, who supports the Companies' Standard Offer Tariff, Standard Offer PPA, and Standard Offer Terms and Conditions, including the administration of the proposed Integration Services Charge.
- **David B. Johnson**, Director of Business Development and Compliance, who supports the Companies' form of Large QF PPA, along with the Notice of Commitment Form available to Standard Offer QFs as well as larger negotiated PPA QFs.
- **Nick Wintermantel**, Consultant and Partner at Astrapé Consulting, who supports the Astrapé Solar Ancillary Services Study developed on behalf of the Companies, to quantify DEC's and DEP's ancillary services cost of integrating QF solar, which is used to calculate the Integration Services Charge.

The Companies reserve their right to put forward additional witnesses as part of their rebuttal case.

III. Legal Issues Presented for Commission Determination

The Companies' Application, along with the pre-filed direct testimony of the Companies' witnesses, provide the Commission a transparent explanation of the Companies' avoided cost rates and methodology and present DEC's and DEP's proposed Standard Offer Tariff, Terms and Conditions, Standard Offer PPA, Large QF PPA, and Notice of Commitment form for Commission review and approval. As extensively supported in the Companies' Application and testimony, and as more succinctly set out below, the Companies' avoided cost rates and Standard Offer tariffs, and other contractual agreements to implement PURPA—including, but not limited to, the Companies' Standard Offer PPA, which is available to QFs up to 2 MW in size, and Large QF PPA, which is available to small power producer QFs larger than 2 MW in size—comply with the requirements and goals of PURPA, FERC's implementing regulations, as well as meet the new requirements of Act 62.

To assist the Commission in its review of the Companies' Application and supporting pre-filed direct testimony, Duke has briefly addressed how the Companies' Application and the testimony of its witnesses meet Act 62's new PURPA implementation requirements, as set forth in Section 58-41-20:

A. The Companies' Avoided Cost Methodology and Rates Fully and Accurately Account for the Costs Avoided or Incurred by the Companies in Purchasing Power from QFs

Section 58-41-20(B) of the Act instructs the Commission to "treat small power producers on a fair and equal footing with electric utility-owned resources" by ensuring that:

> (1) rates for the purchase of energy and capacity fully and accurately reflect the electrical utility's avoided costs; [and]
>
> . . .
>
> (3) each electrical utility's avoided cost methodology fairly accounts for costs avoided by the electrical utility or incurred by the electrical utility, including, but not limited to, energy, capacity, and ancillary services provided by or consumed by small power producers including those utilizing energy storage equipment. Avoided cost methodologies approved by the commission may account for differences in costs avoided based on the geographic location and resource type of a small power producer's qualifying small power production facility.

As set forth in the Companies' Application and discussed in the testimony of Witness Snider, Duke has fully and accurately calculated DEC's and DEP's future avoided cost of capacity and energy based upon the long-used and well-established peaker methodology[1] and has applied inputs and assumptions that are consistent with Duke's most current integrated resource planning as presented in the Companies' 2019 IRP Updates.[2] Together, application of the peaker methodology and the use of data and inputs from the Companies' recently-filed 2019 IRPs form the basis for the Companies' determination of DEC's and DEP's future cost of energy and new generating capacity needs that may be avoided by purchases from QFs in compliance with the mandates set forth in Section 58-41-20(B)(1) & (3) of the Act. As explained by Witness Snider, Duke has relied upon DEC's and DEP's 2019 IRPs to accurately quantify the Companies' current estimates of

[1] *See* Joint Application ¶¶ 16-23; Snider Direct at 10:3-17, 11:6-12:2 (noting that the Commission has consistently accepted the Companies' use of the peaker methodology to quantify DEC's and DEP's forecasted avoided costs and that the National Association of Regulatory Utility Commissioners has recognized the methodology as one of the "dominant methodologies for measuring avoided cost under PURPA").

[2] DEC's and DEP's 2019 IRPs were filed with the Commission on September 4, 2019, in Docket Nos. 2019-224-E and 2019-225-E, respectively.

future capacity needs and projections of future costs that QFs can avoid, specifically including:

- Relying upon data and assumptions from the Companies' 2019 IRPs identifying that DEC's first avoidable capacity need arises in 2026, while DEP's first year of avoidable capacity need arises in 2020;[3]
- Relying upon on the same fuel commodity pricing and assumptions to calculate avoided energy costs as the Companies assumed in DEC's and DEP's 2019 IRPs;[4] and
- Relying upon the same projections of future loss of load risks and capacity needs to determine the seasonal periods (*i.e.*, summer, winter, and shoulder months) and hours of the day when capacity and energy delivered by QFs is of most value to the utility in avoiding costlier generation and future capacity needs.[5]

In developing its avoided cost rates, Duke has consistently applied the same assumptions relied upon in the 2019 IRP Updates to fully and accurately reflect the Companies' future avoided capacity and energy needs and to develop avoided cost rates that treat small power producer QFs on a fair and equal footing with future electrical utility owned resources. Further, the Companies' avoided energy and avoided capacity rate design also helps to ensure that avoided cost rates accurately compensate QFs for the value of the energy and capacity they provide to the Companies and customers during peak and

[3] Snider Direct at 16:5-12; Joint Application ¶ 20.
[4] *Id.* at 26:4-15.
[5] *Id.* at 26-28.

non-peak demand periods throughout the year, consistent with PURPA, FERC's implementing regulations, and Act 62.[6]

The Companies' avoided cost methodology and rates also account for costs avoided or incurred related to ancillary services, as now required by the Act.[7] To that end, DEC and DEP have included an Integration Services Charge to recognize the increased operating reserve requirements caused by growing variable and non-dispatchable solar capacity on the Companies' systems.[8] In particular, because energy output from solar resources is variable such that it can unexpectedly and rapidly drop off or ramp up, the Companies must carry increased operating reserves to balance and regulate the system in real time. As set forth in the Application and addressed in detail by Witness Snider, the Integration Services Charge was developed based on a study recently conducted for Duke by Astrapé Consulting of the current cost to provide the additional operating reserves or generation "ancillary services" needed to integrate increasing levels of solar QF generation into the DEC and DEP systems.[9]

The Integration Services Charge is designed to reflect the average integration cost for all existing and committed solar resources and does not assign the full "incremental" integration costs to new solar resources. The $1.10/MWh Integration Services Charge for DEC and $2.39/MWh Integration Services Charge for DEP is also based only on existing and committed solar capacity in DEP (2,950 MW) and DEC (840 MW) across each utility's respective system. The difference in the DEP and DEC cost is largely driven by the significantly greater amount of existing and committed future solar capacity in DEP

[6] Joint Application ¶ 23; Snider Direct at 21-30.
[7] S.C. Code Ann. § 58-41-20(B)(3).
[8] Joint Application ¶¶ 24-29.
[9] *Id.* ¶ 25; Snider Direct at 34.

compared to DEC. Witnesses Wintermantel and Snider describe the Companies' quantification of the Integration Services Charge and Witness Wheeler addresses how the Companies have included the Integration Services Charge in the new Standard Offer and how the Charge will apply to QFs committing to sell under the Large QF PPA.[10]

Duke has also proposed to accommodate solar generators that demonstrate the capability of operating in a manner that mitigates the need for additional ancillary service requirements (via, for example, inclusion of energy storage devices). As explained by Witness Snider, an energy storage device co-located with the solar QF can be operated to control and "smooth" the solar energy injected into the system thereby reducing or eliminating the Companies' need to maintain increased operating reserves to reliably integrate the solar generator's power into the grid. Where a solar QF is not causing these increased integration costs, the QF may opt to forego the Standard Offer Tariff and contractually commit through a negotiated PPA with DEC or DEP to operate as a "Controlled Solar Generator" in order to avoid paying the Integration Services Charge.[11] However, both Standard Offer and Large QFs that do not commit to operate as Controlled Solar Generators will be subject to the Integration Services Charge.[12]

B. The Companies' PURPA Implementation Framework Conforms to the Requirements of Act 62 Directing the Commission to Comply with PURPA, FERC's Implementing Regulations and Orders, and to Strive to Reduce the Risks to the Using and Consuming Public

In reviewing Duke's Application and administering its responsibilities to implement PURPA in the State, Section 58-41-20(A) directs that:

[10] Joint Application ¶¶ 25-28; Snider Direct at 30-41; Wintermantel Direct, at 9-25; Wheeler Direct, at 25-32.
[11] Joint Application ¶ 29; Snider Direct at 39.
[12] Joint Application ¶ 29; Snider Direct at 41.

> Any decisions by the commission shall be just and reasonable to the ratepayers of the electrical utility, in the public interest, consistent with PURPA and the Federal Energy Regulatory Commission's implementing regulations and orders, and nondiscriminatory to small power producers; and shall strive to reduce the risk placed on the using and consuming public.

This directive clearly and unambiguously relays the General Assembly's intent that the Commission should apply the PURPA implementation framework as originally established by Congress and as prescribed in FERC's regulations implementing PURPA.

To ensure that rates for purchase of energy and capacity from QFs are just and reasonable to the utility's customers and non-discriminatory to QFs, Act 62 reinforces the express requirements of PURPA and FERC's implementing regulations governing rates for purchases from QFs that such rates shall not exceed the electric utilities' "incremental cost of alternative energy" which is the utility's "avoided costs" from purchasing power from QFs.[13] 16 U.S.C. § 824a-3(b), (d); 18 C.F.R. 292.304(a). Importantly, as Witness Brown explains, the Commission should *not* subsidize the solar industry by paying small power producers at rates above avoided costs, which would be unlawful under PURPA, FERC's implementing regulations and, by extension, Act 62. To the contrary, Act 62 provides that fixing avoided cost rates that "fully and accurately reflect the utility's avoided costs" is the lawfully mandated approach to implementing PURPA and accomplishes the requirement of "treat[ing] small power producers on a fair and equal footing with electric utility-owned resources" as PURPA has always intended.[14]

[13] Brown Direct, at 5-8.
[14] S.C. Code Ann. § 58-41-20(B)(1).

Act 62 also expands on the consumer protection provisions already set forth in PURPA, by specifically directing that the Commission's decisions implementing PURPA "shall strive to reduce the risk placed on the using and consuming public" in implementing PURPA in this proceeding.[15] Witness Brown and Witness Snider both explain how the Companies have taken this consideration into account in calculating avoided costs, including by limiting contracts with forecasted administratively-determined avoided costs to a period of 10 years , but still providing other competitive options for QFs seeking a longer-term fixed price PPA.[16]

C. The Companies' Standard Offer PPA and Large QF PPA are Commercially Reasonable and Consistent with PURPA and FERC's Implementing Regulations

Section 58-41-20(B) of the Act further instructs that:

> (2) power purchase agreements, including terms and conditions, are commercially reasonable and consistent with regulations and orders promulgated by the Federal Energy Regulatory Commission implementing PURPA[.]

With respect to the Companies' Standard Offer, FERC's regulations have long required states implementing PURPA to make standard rates and terms available to QFs that are 100 kilowatts and smaller in recognition of the fact that small, unsophisticated QFs could be challenged by the transactional costs of bilaterally negotiating individualized rates with electric utilities.[17] Act 62 expands on that longstanding requirement, mandating that a utility's standard offer extend to QFs that are 2 MW or smaller in size.[18] Here, the Companies' Schedule PP Standard Offer Tariff, Standard Offer PPA, and Standard Offer

[15] S.C. Code Ann. § 58-41-20(A).
[16] Brown Direct, at 16-18; Witness Snider, 7-8.
[17] *See* Order No. 69, at 12,223; 18 C.F.R. § 292.304(c).
[18] S.C. Code Ann. § 58-41-10(15).

Terms and Conditions represent the contractual mechanisms and rates through which QFs eligible for the Standard Offer may elect to sell power to the Companies pursuant to PURPA. As Witness Wheeler explains, the Companies' Standard Offer documents are based on forms that have proven acceptable to numerous QF developers, their investors and lenders in recent years—including 49 projects located in South Carolina and more than 700 projects on a system-wide basis over the past 8 years—which strongly supports the commercial reasonableness of the Companies' Standard Offer Documents.[19]

The Companies' Large QF PPA sponsored by Witness Johnson is similarly compliant with both the size and commercial reasonableness requirements set forth in Act 62. Although the Companies have never been required by law to offer a standardized form Large QF PPA to all QFs, it has been the Companies' consistent practice for a number of years to employ such a standard form as a baseline for PPAs offered to larger QFs that commit to sell their output to DEC or DEP.[20] As Witness Johnson explains, the Companies believe that the commercial reasonableness of a contract is best determined between willing contracting parties in the business arena and involves both legal and business judgment and assessment of the risk which a reasonable person would be willing to accept in the exercise of his/her business discretion and judgement.[21] Recognizing that the Companies' Large QF PPA is based on forms that have been proven to be acceptable to QF developers, their investors, and lenders through a well-established course of dealing which has extended over many years, Witness Johnson explains that the terms can be presumed to be commercially reasonable.[22]

[19] Wheeler Direct at 12:17-14:2.
[20] Johnson Direct at 26:16-27:35; Joint Application ¶ 39.
[21] Johnson Direct at 27:8-13.
[22] *Id.*; Joint Application ¶ 39.

D. The Companies' Standard Offer and Large QF PPA Meet the Requirements of Act 62

Section 58-41-20(F)(1) of the Act further instructs that:

> Electrical utilities, subject to approval of the commission, shall offer to enter into fixed price power purchase agreements with small power producers for the purchase of energy and capacity at avoided cost, with commercially reasonable terms and a duration of ten years.

The Companies' Standard Offer Tariffs reflect the updated rates and terms supported in Section II of the Application, and continue to provide eligible QFs with variable, 5-year, and 10-year fixed term options. The Companies have also included certain provisions of the Standard Offer Tariff, the Standard Offer PPA, and the Terms and Conditions to clarify the rights and obligations of the Companies and QFs based upon the Companies' recent experience with significant QF development under the pre-existing Standard Offer Tariffs. These provisions are described in greater detail in both the Application and testimony of Company Witness Wheeler.

Specific to the Companies' proposed form Large QF PPA, Section 58-41-20(A) of the Act instructs the Commission to approve:

> one or more standard form power purchase agreements for use for qualifying small power production facilities not eligible for the standard offer. Such power purchase agreements shall contain provisions, including, but not limited to, provisions for force majeure, indemnification, choice of venue, and confidentiality provisions and other such terms, but shall not be determinative of price or length of the power purchase agreement.

As set forth in the Application and further described by Witness Johnson, the Companies' Large QF PPA is a comprehensive power purchase agreement that is substantially similar to the form of PPA that the Companies have used to contract with

numerous large QF facilities over the past several years.[23] The Large QF PPA includes each of the provisions specified by the Act and provides for the exclusive purchase and sale of 100% of the output of energy and capacity from a QF facility on a fixed price, fixed term basis. As Witness Johnson explains, the longstanding QF marketplace acceptance of the Companies' Large QF PPA—which has facilitated an unparalleled level of solar QF development across the Companies' service territories in North Carolina and South Carolina—confirms that the PPA is commercially reasonable as required by Act 62.[24]

E. The Companies' Notice of Commitment Form Meets the Requirements of Act 62

Section 58-41-20(A) of the Act instructs the Commission to approve:

> a standard notice of commitment to sell form to be used for this purpose that provides the small power producer a reasonable period of time from its submittal of the form to execute a power purchase agreement. In no event, however, shall the small power producer, as a condition of preserving the pricing and terms and conditions established by its submittal of an executed commitment to sell form to the electrical utility, be required to execute a power purchase agreement prior to receipt of a final interconnection agreement from the electrical utility.

As explained in the Companies' Application and by Witness Johnson, FERC's regulations implementing PURPA's mandatory purchase obligation uniquely provide a QF a right to unilaterally commit itself to deliver energy and capacity over a specified term and, importantly, to bind the utility to purchase the QF's energy and capacity output at the utility's avoided cost rate by establishing what is known as a non-contractual "legally enforceable obligation" ("LEO").[25] The Notice of Commitment Form is thus intended to

[23] Joint Application ¶¶ 38-39; Johnson Direct at 24.
[24] Johnson Direct at 27-30.
[25] Joint Application ¶ 35-37; Johnson Direct at 30:2-16.

provide small power producer QFs with a Commission-approved non-contractual option to establish a LEO under PURPA separate from execution of a contractually-binding PPA.

Moreover, because the establishment of a LEO turns on the QF's commitment to sell its output to the utility over a specified term,[26] the Companies' Notice of Commitment Form must establish the QF's binding and substantial commitment to sell the electrical output of its facility in order to establish a LEO and should not provide the QF an uncommitted option to walk away from the PPA negotiations without liability. The Companies' Notice of Commitment Form is thus designed to ensure the QF makes a binding and substantial commitment to establish a non-contractual LEO prior to executing a PPA by requiring the small power producer QF to:

(a) Obtain certification with FERC as a QF;

(b) Commit to execute a PPA within 90 days and to deliver power within 365 days of submittal of the Notice of Commitment Form;

(c) Demonstrate control of the project site and required permits; and

(d) Request to become an interconnection customer of the utility.[27]

These provisions are consistent with FERC's regulations, guidance from other state commissions, and the requirements of Act 62 and are designed to ensure that the small power producer QF makes a binding and substantial commitment when it submits the Form and to avoid gaming of the non-contractual LEO process.

[26] *JD Wind 1, LLC*, 129 FERC ¶ 61,148 at P 25 (2009) (explaining that "a QF, by committing itself to sell to an electric utility, also commits the electric utility to buy from the QF; these commitments result either in contracts or in non-contractual, but binding, legally enforceable obligations.").
[27] Joint Application ¶ 36.

IV. Conclusion

Duke Energy's avoided cost rates and implementation of PURPA, as presented in the Companies' Application and supporting testimony, are just and reasonable to customers, non-discriminatory to small power producer QFs, and achieve the mandates from the South Carolina General Assembly set forth in Act 62, with significant consideration being given to the impact to customers.

Respectfully submitted, this the 30th day of September, 2019.

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